CLAIMS

1. **(Withdrawn)** A spherical slip joint comprising:

(a) a metal female joint surface having a spherical seating surface;

(b) a metal male joint surface having a spherical contact surface, the contact surface selected to engage the seating surface;

(c) a coating on the seating surface and the contact surface, the coating including a metal and less than 10% by weight non reactive grit, the coating having an Ra_{max} between 50 microinches and 250 microinches,

the coated female joint surface and the coated male joint surface engaged to form a sealed interface there between.

2. **(Withdrawn)** The spherical slip joint of Claim 1, wherein the female joint surface and the male joint surface are stainless steel.

3. **(Withdrawn)** The spherical slip joint of Claim 1, wherein the coating has less than 5% by weight non reactive grit.

4. **(Withdrawn)** The spherical slip joint of Claim 1, wherein the coated female joint surface and male joint surface are engaged in an as formed state.

5. **(Withdrawn)** A spherical slip joint comprising:

(a) a metal female joint surface having a spherical seating surface;

(b) a metal male joint surface having a spherical contact surface, the contact surface selected to engage the seating surface;

(c) an unfinished surface coating on the seating surface and the contact surface, the unfinished surface coating including metal and less than 10% by weight non reactive grit, the coating having an Ra_{max} between 50 microinches and 250 microinches.

6. **(Withdrawn)** The spherical slip joint of Claim 5, wherein the surface coating has a bond strength with one of the seating surface and the contact surface greater than 10,000 psi.

7. **(Original)** A method of forming a surface coating on confronting spherical surfaces, the surfaces defining a sealed interface there between, the method comprising:

(a) impacting each of the confronting spherical surfaces with a mixture of a given density on the confronting surfaces, the mixture comprising chromium, cobalt, iron, and silicon, and a ceramic/non-reactive grit, to form a surface coating, the surface coating having a density greater than the given density; and

(b) engaging the confronting surfaces to form a sealed interface there between.

8. **(Original)** The method of Claim 7, further comprising impacting each of the confronting spherical surfaces with aluminum oxide as the ceramic grit.

9. **(Original)** The method of Claim 7, further comprising impacting each of the confronting spherical surfaces with a mixture having less than 5% by weight non-reactive grit.

10. **(Original)** The method of Claim 7, further comprising impacting each of the confronting spherical surfaces with a mixture at a temperature less than a melting point of the non-reactive grit and at a velocity sufficient to bond at least a portion of the chromium, cobalt, iron, and silicon to the substrate.

11. **(Original)** A method of forming a surface coating on a substrate, the method comprising:

(a) impacting the substrate with a mixture of a metal particles and aluminum oxide at a temperature less than a melting point of the aluminum oxide and at a velocity sufficient to bond at least a portion of the metal particles to the substrate.

12. **(Original)** The method of Claim 11, wherein the temperature of the mixture is less than 5000 °F.

13. **(Original)** The method of Claim 11, wherein the velocity of the mixture is greater than 600 meters/second.

14. **(Original)** A method of forming a sealed interface between two confronting surfaces, the method comprising:

(a) impacting each of the confronting surfaces with a mixture of metal powder and a non reactive grit to form a surface coating, the mixture having a given hardness and the surface coating having a hardness greater than the given hardness; and

(b) contacting the surface coatings to form a sealed interface.

15. **(Original)** The method of Claim 14, further comprising forming the mixture with between 70% to 90% by weight metal powder and between 30% to 10% by weight non reactive grit.

16. **(Original)** The method of Claim 14, further comprising forming the mixture with the metal powder having a particle size between 5μm and 135μm.

17. **(Original)** The method of Claim 14, further comprising forming the mixture with the non reactive grit having a particle size between 5μm and 135μm.

18. **(Original)** A method of forming a sealed interface between confronting surfaces,

(a) forming a coating having a density greater than 8g/cc and an R_A between 50 microinches and 250 microinches on each of the confronting surfaces, from impacting a mixture having a density less than 8g/cc; and

(b) maintaining the surfaces in a sufficient contacting relationship to form a sealed interface between the coated confronting surfaces.

19. **(Original)** The method of Claim 18, further comprising contacting the coated surfaces prior to surface treating the coated surfaces.

20. **(Original)** A method of forming a sealed interface between confronting surfaces in a spherical slip joint subject to vibratory movement, the method comprising:

(a) impacting a metal powder and a non reactive grit mixture onto the confronting surfaces at a velocity to form a metal layer on the confronting surface and substantially preclude chemical reaction between the metal powder and the grit.

21. **(Original)** The method of Claim 20 further comprising forming the metal powder to include chromium, iron and cobalt.

22. **(Original)** A method of forming a sealed interface between confronting surfaces in a spherical slip joint subject to vibratory movement, the method comprising:

(a) impacting a mixture of metal powder and a non reactive grit mixture of a given density onto the confronting surfaces at a velocity to form a surface coating on the confronting surface, the surface coating having a hardness greater than the given hardness.

23. **(Original)** A method of forming a surface coating on a substrate, the method comprising:

(a) impacting the substrate with metal particles at a temperature less than a melting point of the metal particles and at a velocity sufficient to bond at least a portion of the metal particles to the substrate.

24. **(Original)** The method of Claim 23, wherein the temperature of the metal particles maintained below 5000 °F.

25. **(Original)** The method of Claim 23, wherein the velocity of the metal particles is greater than 600 meters/second.

26. **(Original)** A method of forming a surface coating on a substrate, the method comprising:

(a) impacting the substrate with a mixture of a metal particles and a non metallic grit at a temperature less than a melting point of the grit and at a velocity sufficient to bond at least a portion of the metal particles to the substrate.

27. **(Original)** The method of Claim 26, wherein the temperature of the mixture is less than 5000 °F.

28. **(Original)** The method of Claim 26, wherein the velocity of the mixture is greater than 600 meters/second.